

TRAINING APPARATUSSpecificationa₁

The present invention relates to a training apparatus ~~as~~
generically defined by the preamble to claim 1. a₂

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For gentle massage of the meridians known from traditional Chinese medicine via the palms of the hand, the so-called Qigong balls are known, pairs of which are rotated in the hand and exert a positive effect on the energy balance of the person using them. In this respect, it is also known to use a training apparatus of the type defined at the outset, in which mushroom-shaped end pieces are provided on a relatively short rod-like intermediate element.

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The object of the present invention is to ~~create~~ provide a training apparatus of the type noted above ~~known at the outset~~ whose geometric embodiment serves not only to activate the meridians via the palms of the hands, but also in combination with this, by means of a more-optimal posture and flexibility, especially in the shoulder and chest region, leads to an improvement in respiratory capacity of the person using it and with which more universal applicability is attainable.

To attain this object, in a training apparatus of the type ~~defined at the outset, the characteristics recited in claim 1 are~~ provided.

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The training apparatus of the present invention thus has two spheres of a certain diameter, which are solidly connectable or connected to one another by a rod of a defined length; these spheres can be held in the hand. For the user, because of the steady transition between the balls and the rod, it is possible to allow the rod during use to rotate in all possible directions and also for the neck or transition region between the spheres

and the rod to slide between the fingers. As a result, on the one hand the meridians are activated via the palms of the hands, and on the other the rod, when used accordingly, promotes optimal posture and motion in the shoulder and chest region and thus assures optimal respiration. The training apparatus of the ^{present} invention can be used in conjunction with other exercises, that is, especially whenever a person is performing body, energy, or breathing exercises, or Qigong exercises.

~~Advantageous features of the training apparatus are obtained from the characteristics of one or more of claims 2 - 5.~~

The diameter of the spheres depends on usage in various fields. The optimal total length of the training apparatus varies as a function of the individual shoulder span width of the user; the length of the user's forearm may also play a role. The steady concave transition region or neck region is essential; it leads to universal applicability of the training apparatus, even in the area of other body exercises or calisthenics.

Advantageous features with regard to the geometric dimensions for children and adults of different body configuration and for athletes in different disciplines are ~~obtained from the characteristics of one or more of claims 6 - 9.~~

^{ab}The training apparatus can be in multiple parts, for instance two spheres and one rod; the transition region is associated with either the spheres and/or the intermediate region so that the user can assemble his training apparatus with the optimal dimensions for a desired use. However, it is expedient if, ~~as defined by claim 9,~~ the individual parts form a one-piece training apparatus.

The training apparatus can be made from many types of materials, such as wood, metal, stone, or ~~A~~ plastic.

Further details of the ^{present} invention can be learned from the following description, in which the ^{present} invention is described and explained in further detail in terms of the exemplary embodiment

shown in the drawing. ~~Shown are:~~

Fig. 1, ^{is} a front view of a rod-like training apparatus in accordance with a preferred exemplary embodiment of the present invention;

Fig. 2, ^{is} a side view of the training apparatus of Fig. 1; and

Fig. 3, ^{is} a plan view of the training apparatus of Fig. 1.

The training apparatus 10 shown in a preferred exemplary embodiment in the drawing is formed of a rod-like intermediate element 11 and two spherical end pieces 12 and 13. The training apparatus 10, in this case in one piece, is rotationally symmetrical about its longitudinal axis 14.

The rod-like intermediate element 11, which is symmetrical with respect to a longitudinal center plane 19, is embodied cylindrically over a substantial portion of its length, and in particular in its longitudinal middle region 16. This cylindrical region 16 is adjoined on both sides by a respective conical region 17, 18, which changes over steadily in a neck region or transition region 21, 22 to the applicable spherical end piece 12, 13.

The neck region 21 or 22 is formed by having the spherical form of the end piece 12 or 13 change over steadily into a conversely oriented concave region 23 or 24, which in turn runs approximately at a tangent into the conical region 17 or 18 of the intermediate element 11. The term "steady transition" is intended to imply that the spherical form of the end piece 12 and 13 changes over into the concave region 23 and 24, respectively, via a turning region 25, or in other words without any discontinuity. The neck region 21 and 22 is configured in such a way that its minimum diameter is less than the diameter of the cylindrical middle region 16.

5 The dimensions of the training apparatus 10, that is the diameter of the spherical end pieces 12, 13, the diameter of the thinnest point of the neck region 21, 22, the diameter of the cylindrical middle region 16, and the total length of the rod-like training apparatus 10, including the radius of the concave region 23, 24, depend on whether the training apparatus 10 is intended to be suitable for adults or children, in each case taking into account the average body size and shape. For the total length of the training apparatus 10, body characteristics of the person using it play a role, examples being the shoulder span length and the forearm length, while for the smallest diameter of the neck region and the diameter of the spherical end piece, the hand size of the person using it is determinative.

10 The preferred ranges of dimension are, for the total length of the training apparatus 10, approximately 200 mm to 560 mm; for the diameter of the spherical end piece 12, 13 approximately 30 mm to 75 mm, and for the diameter of the thinnest point in the neck region 21, 22, approximately 17 mm to 25 mm. Within a certain order of magnitude, a relationship of these individual relationships with one another exists. For instance, for the standard shape, the diameter of the spherical end pieces 12, 13 is 47 mm, the diameter of the thinnest point in the neck region 21, 22 is 21 mm, the diameter of the cylindrical region 16 is 36 mm, and the total length of the training apparatus 10 is 400 mm.

25 By way of example, the training apparatus is held on the outside between the palms and rotated. The spherical end pieces 12, 13 may, however, also be held from inside by the palms, since the neck region 21, 22 can slide between adjacent fingers comfortably in each case, and the palms can grip the "inner" spherical shape of the end pieces 12, 13. This can be done either alone or in combination with other body exercises. Because of the spherical shape and the rotational symmetry of the

rod, the meridians known from traditional Chinese medicine are on the one hand activated via the palms, and on the other given technically correct use, optimal posture and flexibility in the shoulder and chest region are promoted, thus assuring optimal respiration. The training apparatus can be employed not only with Asiatic motion systems but also, because of its geometry, in the most various areas. Different physical exercise systems can be mixed and combined with one another readily. Combined applications, such as in jogging, have the effect that the muscles can be enriched with more oxygen because the breathing is made easier, and so not only is the actual goal of the jogging, which is conditioning training, achieved, but also the applicable physical activity is brought into harmony with the energy balance. In certain fitness exercises such as aerobics, the use of the training apparatus 10 also lessens the danger of injury from over-rotation or over- extension, above all in the shoulder or neck region, because the motion of the upper torso is automatically coordinated by the way the training apparatus 10 is held.

Further possible applications are as follows:

At the office for relaxation: If in a break after someone has sat for a long time at his desk, the training rod is held between the palms and rotated while body exercises are being done, then by means of this simple exercise not only is breathing freed up, but the upper spine and the muscles in the chest region, which as a rule are bowed from long periods of sitting at a desk, straighten up again.

In sports and fitness training: In knee bends, the training rod can be held between the palms with the arms outstretched. In this way the training rod prevents the shoulders from being hunched and constricting breathing. In jogging, it is possible to hold the two end spheres of the training rod each in one hand and while running to make the rod

describe a circle in the rhythm of the running. Once again, by coordinating the arm motion, deeper and more relaxed breathing is attained, thus reducing the burden on the body during jogging.

Other training exercises with the aid of the training rod
5 can be performed by athletes in certain disciplines, such as rowing, sprinting, swimming and in particular using the crawl, self defense, and so forth. Here, however, the training rod 10 has greater length dimensions in the range from approximately 600 mm up to 1000 mm or 2000 mm, while the dimensions of the end
10 elements remain the same.

In patient gymnastics and rehabilitation: Bedridden
patients, by simply turning the training rod between their palms, can favorably affect their breathing function and thus many other processes in metabolism. Even in simple body exercises for training muscles, or in coordination exercises, it may be appropriate to use the training rod. For instance, in stretching exercises for mobilizing the spinal muscles,
which are usually to be done sitting on a chair by simply rotating the torso, simply holding the rod not only coordinates the motion but also, because of this coordination, prevents over-extension and thus keeps the airway clear.

In Qigong and Taigiquan: In the field of Qigong, a great number of new exercises can be developed or old exercises can be modified in such a way that they can be simplified with the
25 training rod, so that it is certain that they can also be done correctly. For some meditation postures, the use of the rod is also appropriate.

The training apparatus or training rod 10 can preferably be of wood, for instance. However, it is also possible for the
30 training apparatus 10 to be made from a plastic or a metal, preferably a lightweight metal, or a stone material.

Even if in the exemplary embodiment the training apparatus 10 has been shown and described as being in one piece, it is

understood that it can also be provided in three pieces, so that the three parts, namely the rod-like intermediate element and the two spherical end pieces, can be adapted to given requirements and put together or mounted in a manner not shown in detail.